



**CENTRAL UTAH WATER**  
CONSERVANCY DISTRICT

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July 26, 2016

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Subject: Water Year 2016 Mid-Year Administration of Central Utah Project, Bonneville Unit, Utah Lake / Provo River Storage Exchanges under CUP Water Right Nos. A40523, A36639, A37093, E398, E4319 and Central Utah Water Conservancy District Water Right Nos. E3100 and E3101

Dear Teresa:

The purpose of this letter is to provide a mid-year report of CUP trans-basin imports, reservoir releases, and return flow credits claimed. We have received preliminary information needed for this report from the Provo River Commissioner and the Spanish Fork River Commissioner. In consultation with the commissioners we are estimating some of the information at this time. Once this information has been finalized to us we will update this report and resubmit it to you at the end of the Water Year.

In early 2016, it was clearly evident that the level of Utah Lake would not cross the conversion line or the lowered conversion line. Therefore on March 23, 2016, a request was sent to your office requesting that exchanges E4319, E3100 and E3101 not be used to lower the Utah Lake conversion line in accordance with the Utah Lake Distribution Plan and that those exchanges be used for direct exchange. Furthermore the District also requested to not use E398 until E4319, E3100, and E3101 had been exhausted. The elevation of Utah Lake was not sufficient to cross the lowered conversion line. Therefore CUP system storage would need to be exchanged from Utah Lake using Exchange applications E4319, E3100, E3101 and E398. On April 27, 2016 Kent Jones, State Engineer, responded to our request. In that letter we were instructed that E3100 would be operated on a daily basis beginning at the start of the Utah Lake irrigation season and would end on October 15. E3100 would cease to be available at such a time as it is determined that the secondary water rights in Utah Lake are cut off. Also E398 would not be used until E4319, E3101, and E3100 had been exhausted.

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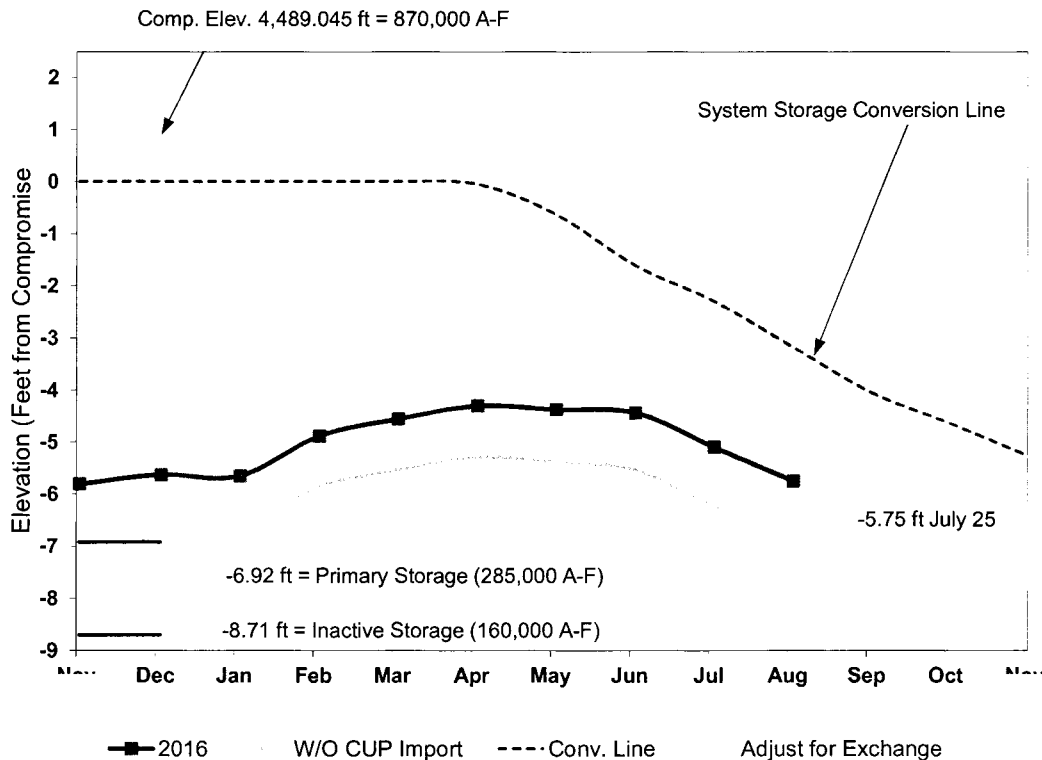
WATER RIGHTS  
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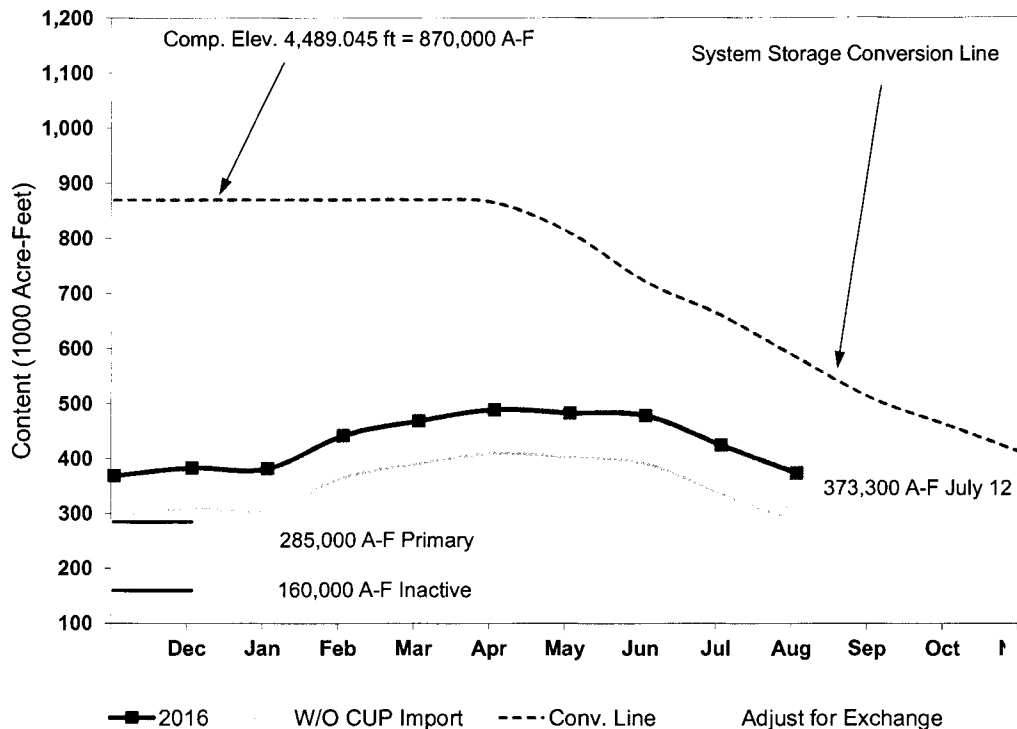
Sources of CUP water in Utah Lake during water year 2016 (November 1, 2015 to October 31, 2016):

- 1) We claim that 71,979 acre-feet of import water under application A36639, was carried over from water year 2015, subject to incremental evaporation, in Utah Lake.
- 2) We claim that water has been conveyed directly from Strawberry Reservoir to Utah Lake under A36639. A total of 23,112 acre-feet was conveyed to and stored in Utah Lake from approximately November 1, 2015 through July 25, 2016. We understand that this will be adjusted for incremental evaporation, even in current year accounting. Adjustments for evaporation will be summarized later in this document.
- 3) We claim return flows from Strawberry Reservoir CUP irrigation deliveries made in South Utah County during water year 2016 under A36639. The amount of CUP water delivered for irrigation use in South Utah County for water year 2016 has not been reported to us by the Spanish Fork River Commissioner. When these values are reported to us we will then claim 35 percent of this amount, subject to incremental evaporation, be credited to CUP water in Utah Lake under A37093.

## Utah Lake



## Utah Lake



Please see the following tables showing our calculations for the above including calculations for incremental evaporation, which we estimate in the amount of 5,824 acre-feet. Please note that for simplification, we have assumed return flows reach the lake the same month the water is delivered to agricultural lands. The total import water amount (carryover, direct, and return flow) claimed in Utah Lake, at the current time, adjusted for incremental evaporation, is 88,448 acre-feet (as of July 25, 2016).

**CUP Import Water in Utah Lake WY2016**

	Stawberry Res.	Strawberry Res.	35 Percent		Total	Total	
	Direct	CUP Ag.	CUP Ag.	Less	CUP Direct and	CUP Utah Lake	
	CUP Release to	Delivery to	Return Flow	Incremental	Return Flow	Storage	
	Utah Lake	S. Utah County	to Utah Lake	Evaporation	to Utah Lake		
Time Period	acre-feet	acre-feet **	acre-feet	acre-feet	acre-feet	71,979 *	
Nov	1,767			-770	997	72,976	
Dec	1,767			-321	1,446	74,422	
Jan	1,767			-207	1,560	75,982	
Feb	1,661			-192	1,469	77,451	
Mar	2,062			-227	1,835	79,286	
Apr	1,701			-402	1,299	80,585	
May	7,436			-860	6,576	87,161	
Jun	3,440			-1,306	2,134	89,295	
Jul ** Partial	1,511			-2,358	-847	88,448	
Aug					0	88,448	
Sep					0	88,448	
Oct					0	88,448	
Total	23,112			-6,643	16,469		
* Carryover from WY2015 adjusted for incremental evaporation ** CUP Ag Deliveries have not yet been reported							

**Incremental Evaporation from CUP Import Water in Utah Lake WY2016**

		EOM	EOM			
		Surface Area	Surface Area	Incremental	Incremental	
	EOM	w/ CUP	w/o CUP	Increase in	Evaporation	Incremental
	Elevation	Import Water	Import Water	Surface Area	kc=1.35	Evaporation
Time Period	feet bel. Comp.	acres	acres	acres	inches	acre-feet
Nov	-5.63	78,064	74,762	3,302	2.80	770
Dec	-5.65	77,996	74,619	3,377	1.14	321
Jan	-4.89	80,530	77,307	3,223	0.77	207
Feb	-4.56	81,607	78,409	3,199	0.72	192
Mar	-4.31	82,414	79,203	3,211	0.85	227
Apr	-4.38	82,189	78,905	3,284	1.47	402
May	-4.44	81,995	78,413	3,582	2.88	860
Jun	-5.10	79,838	75,950	3,888	4.03	1,306
Jul	-5.75	77,657	73,569	4,088	6.92	2,358
Aug					9.33	0
Sep					8.30	0
Oct					5.19	0

**Water Available for CUP in Utah Lake**

<b>Category</b>	<b>acre-feet</b>
Import from Water Year 2015	71,979
A36639 directly conveyed to Utah Lake for exchange under E398	23,112
A36639 return flow in south Utah County area for exchange under A37093 and E398	Not Reported
Less Incremental Evaporation Loss on the above	-6,643
<b>Total CUP import water in Utah Lake available for Exchange</b>	<b>88,448</b>
E4319	7,900
E3101	16,862
E3100	33,212
<b>Total Available Utah Lake water for Exchange under E4319, E3100, E3101</b>	<b>57,974</b>
CUP System Storage in Jordanelle and Deer Creek Reservoirs as of July 25, 2016	88,586
CUP System Storage in Jordanelle and Deer Creek Reservoirs Released to Provo River	8,953
<b>Total CUP System Storage in Jordanelle and Deer Creek Reservoirs to be Exchanged</b>	<b>79,633</b>
CUP System Storage in Jordanelle and Deer Creek Reservoirs after Utah Lake water exchange	21,659
Amount remainig for Exchange under E4319, E3100, E3101	0
Total CUP import water in Utah Lake available for Exchange	88,448
CUP Import Water in Utah Lake Required for Provo River Storage Exchange	21,659
<b>Total CUP import water remaining in Utah Lake available after Exchange</b>	<b>66,789</b>

It is our understanding that the Utah Lake irrigation season began on April 20, 2016, using October 15, 2016 as the end date for irrigation calculates a 177 day irrigation season. Under E3100 at full supply 57,073 Acre-Feet is available, this year it is not likely that a full supply will be available under secondary water rights. E3100 will produce (57,073 Acre-Feet/177 days) approximately 322 Acre-Feet per day. The above table estimates that E3100 will be available at least through August 1, 2016. CUP System storage through July has totaled 88,586 Acre-Feet, of that 8,953 has been released to the Provo River and was delivered to Utah Lake. Exchanges E4319, E3101 and E3100 have produced 57,974 Acre-Feet leaving 21,659 Acre-Feet of system storage to be exchanged under E398. Incremental evaporation has been calculated for the CUP import water stored in Utah Lake at 6,643 Acre-Feet through the current date. This leaves 66,789 Acre-Feet of CUP import water stored in Utah Lake.

We anticipate that the natural level (Utah Lake current storage minus CUP import water) will reach the Primary Storage level sometime in early August. We understand that this means that Utah Lake secondary water rights must be cut off in order to protect more senior water rights. When this occurs, as CUWCD is a major holder of secondary water rights, CUWCD's CUP operations are affected as shown in this letter. We request that State Engineer take appropriate steps to protect prior rights and the remaining CUP import water.

Teresa Wilhelmsen, P.E.

July 26, 2016

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When additional data becomes available and if necessary this report will be updated and resubmitted to you. Please contact me if you have any questions or need additional data.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Jared D. Hansen", with a long horizontal flourish extending to the right.

Jared D. Hansen, P.E.

Central Utah Project Manager

JDH:

cc: Kent Jones – State Engineer  
Stan Roberts – Provo River Commissioner  
John Mendenhall – Spanish Fork River Commissioner  
John Larsen – Utah Lake/Jordan River Commissioner  
Mike Wilson – Metropolitan Water District of Salt Lake and Sandy  
Richard Bay – Jordan Valley Water Conservancy District  
Keith Denos – Provo River Water Users Association  
Wayne Pullan – U.S. Bureau of Reclamation  
Justin Record – U.S. Bureau of Reclamation  
Reed Murray – U.S. Department of Interior